

sub C1
cont
A2 } said sender means having detection means for detecting said signal, and
switching means,

such that on detection of said signal and, on the basis of the unique representation of the signal, the switching means is controlled so as to connect predetermined circuitry across the line at said other end to enable a selected characteristic of the line to be measured.

A3 } 10. (Amended) A method of remotely measuring characteristics of a communications line, comprising the steps of:

connecting receiver means to a remote end of the communications line;

connecting sender means to the other end of the communications line;

sub C2 } causing the receiver means to generate a signal in response to a selection of one of a plurality of characteristics of said line to be measured, said signal uniquely representing said selected characteristic;

transmitting said signal along the communications line toward the sender means; and

detecting said signal through the sender means and, on the basis of the unique representation of the signal, controlling switching means to connect predetermined circuitry across the line at said other end to enable a selected characteristic of the line to be measured.

sub C5 } 19. (Amended) A method of testing a communications line so as to ascertain and measure one or more characteristics of the communications line
A4 }

employing random switching between functions to select said characteristics, the method comprising the steps of:

connecting receiver means to a remote end of the communications line;

connecting sender means to the other end of the communications line;

generating a signal in response to the random selection on said receiver means of one of said one or more characteristics, said signal uniquely representing the selected characteristic;

transmitting said signal to said sender means along said communications line;

detecting said signal at said sender means; and

connecting predetermined circuitry, on the basis of said unique representation, across the communications line at said other end to enable the selected characteristic to be ascertained and measured.

24. (Amended) Apparatus for testing a communications line so as to ascertain and measure a plurality of characteristics of the line, said apparatus comprising:

receiver means for connection to a remote end of the communications line;

sender means for connection to the other end of the communications line;

selection means enabling the random selection of one of said characteristics;

said receiver means generating a signal in response to the random selection of one of said characteristics;

said signal uniquely representing the selected characteristic and being transmitted along the communications line for receipt by the sender means;

detection means for detecting said transmitted signal;

switching means for connecting predetermined circuitry across the line at said other end; and

such that one detection by said detection means of said transmitted signal, said switching means connects said predetermined circuitry to enable the selected characteristic to be ascertained and measured.

[Please add the following new claims 29-33:]

--29. Apparatus for remotely measuring characteristics of a communications line, comprising:

a receiver unit connected to one end of the communications line, said receiver unit including a signal generator for generating a signal uniquely representing a characteristic of the communications line to be measured and a signal transmitter for transmitting the generated signal; and

a sender unit connected to another end of the communication line, said sender unit including a signal detector that detects the signal transmitted from the receiver unit, measurement-related circuits, and a switching circuit controlled in accordance with the detected signal to selectively connect at least one of the

measurement circuits across the communications line to enable the characteristic of the communications line to be measured.

30. Apparatus as claimed in claim 29, wherein the signal uniquely representing a characteristic of the communications line comprises a coded series of pulses.

31. Apparatus as claimed in claim 29, wherein the switching circuit comprises relays.

Ab 32. Apparatus as claimed in claim 29, wherein the characteristic of the communications line is one of the group consisting of signal loss, noise, insulation resistance, loop resistance, and DC voltage.

33. Apparatus as claimed in claim 29, wherein the receiver unit further comprises:

SCB 30 measurement circuits; and

a switching circuit for connecting at least one of the measurement circuits across the communications line to enable the characteristic of the communications line to be measured.--